

**REMARKS**

The Examiner has rejected the Claims 1-10 under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner rejects Claim 1 and 4 as the phrases "the resulting amplitude modulation" and "more than one multiple of said frequency  $f$ " are unclear. Applicant respectfully submits the following clarifications.

The system detects light which has a wavelength. This wavelength is changed over time, i.e. it is wavelength modulated at a frequency  $f$ . If a substance is present in the optical path that has an absorption that varies with the wavelength, the result of the wavelength modulation is a varying amplitude of the received reflected light, i.e. an amplitude modulation. The resulting amplitude modulation is thus the result of the presence of a substance on the wavelength modulated light. This amplitude modulation is, as assumed by the Examiner, detected in the reflected light.

Even if the wavelength is modulated at a single frequency  $f$ , the resulting amplitude modulation may appear at several multiples of  $f$ , so in the reflected light several multiples of  $f$  may be detected.

The Examiner further rejects Claims 2 as the phrase "to select and wavelength modulate light of at least one wavelength" is unclear. The phrase is intended to be interpreted as both selecting the wavelength and modulating that wavelength, i.e. it could alternatively be phrased "to select light of at least one wavelength and to modulate said wavelength".

The Examiner has further rejected the Claims 1-10 under 35 U.S.C. 103 as being anticipated by Finkle in view of Barbour. The examiner states that Finkle discloses a system for measuring a road condition, the system comprising a reflectance spectrometer which is a wavelength modulation spectrometer. The examiner further states that the wavelength modulation spectrometer modulates the wavelength of light, and detecting the resulting amplitude modulation in the presence of an absorbing substance would be obvious in view of the teachings of Barbour.

In reply thereto, Applicant has carefully reviewed Finkle and Barbour, and respectfully submits that the examiner has misunderstood the teachings of Finkle. Column 3, lines 1-5 of Finkle states that the intensities, not the wavelengths, of the light in the respective wave bands are modulated. Including the passage in Finkle that the Examiner refers to, Finkle does not anywhere

refer to modulation of the wavelength of light and the reflectance spectrometer used in the system is not a wavelength modulation spectrometer. Considering that that the spectrometer used in Finkle is not a wavelength modulation spectrometer and that therefore the wavelengths are not modulated, no amplitude modulation as a result of such a wavelength modulation may occur, thus the teachings of Barbour cannot be combined with those of Finkle in a useful way.

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In view of the above, therefore, Applicant respectfully submits that Finkle in view of Barbour is patentably different from Applicant's invention and does not disclose each and every element thereof. Therefore, Applicant respectfully submits that the Claims 1-10 are not anticipated by Finkle in view of Barbour.

In view of the above, therefore, it is respectfully requested that this request for reconsideration be carefully considered and entered and the case passed to issue.

Respectfully Submitted,

  
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